DOCUMENT RESUME

ED 128 126 RC 009 389

| | |
|---|---|
| AUTHOR | Edington, Everett D. |
| TITLE | Educational and Occupational Aspirations and Expectations for Native American Youth in New Mexico. |
| REPORT NO | Sem-15 |
| PUB DATE | Aug 76 |
| NOTE | 21p.; Paper presented at Seminar 15, "Rural Youth: Human Resource or Human Burden?" of the World Congress of Rural Sociology (4th, Torun, Poland, August 1976) |
| EDRS PRICE | MF-$0.83 HC-$1.67 Plus Postage. |
| DESCRIPTORS | *American Indians; *Aspiration; Comparative Analysis; *Education; *Expectation; Females; Grade 10; Males; *Occupations; Racial Differences; Rural Areas; *Rural Youth; Seniors; Sex Differences; Tables (Data) |
| IDENTIFIERS | Apaches; Navajos; *New Mexico; Pueblos; World Congress of Rural Sociology (4th) |

ABSTRACT

Levels of educational and occupational aspiration and expectation of 139 male and female, rural, New Mexican, American Indian youth (sophomores and seniors) were examined. Utilizing questionnaires and fixed-choice stimulus questions, data were gathered to determine: educational and occupational aspirations and expectations; goal deflections for education and occupation; male and female differences for educational and occupational aspirations, expectations, and deflection; 10th and 12th grade comparisons for educational and occupational aspirations, expectations, and deflection; and the existence of interactions among grade level and sex on educational and occupational aspirations, expectations, and deflection. Results indicated: female educational aspirations were stable for 10th and 12th grades, while male aspirations at the 10th grade level were significantly below those of female sophomores and senior males (the same trend was operative for the educational expectation measure and there was no significant goal deflection); both male and female senior occupational aspirations were significantly higher than those of the sophomore group, but while there were no significant differences between the groups, there was significant goal deflection among senior females; educational and occupational aspirations and expectations within each group did not deflect significantly except among female seniors. (JC)

**********
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
**********

ED128126

FOURTH WORLD CONGRESS OF RURAL SOCIOLOGY

NINTH EUROPEAN CONGRESS OF RURAL SOCIOLOGY

August 9-13, 1976

Torun, Poland

THEME:

# The Integrated Development of Human and Natural Resources: The Contribution of Rural Sociology

## Seminar 15: Rural Youth: Human Resource or Human Burden?

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

2 0 0 0 9 3 8 9

ED128126

# EDUCATIONAL AND OCCUPATIONAL ASPIRATIONS AND EXPECTATIONS FOR NATIVE AMERICAN YOUTH IN NEW MEXICO

Everett D. Edington

Educational Resources Information Center (ERIC)
Clearinghouse on Rural Education and Small Schools (CRESS)

New Mexico State University
Las Cruces, New Mexico

Presented at the Fourth World Congress of Rural Sociology, Torun, Poland, August 1976.

RC 009389

Analysis of Data: Educational and Occupational Aspirations and Expectations for Native American Youth in New Mexico

## Introduction

### Purpose of Study

The purpose of this study was to determine and compare the levels of educational and occupational aspiration and expectation held by male and female Native American youth at the high school sophomore and senior level in rural New Mexico. Due to an insufficient amount of data in some cells, an analysis by tribe was not possible. This study was part of a larger study which investigated the same variables across ethnic groups (Anglo, Mexican American, and Native American).

### Objectives

Data collected from questionnaires were analyzed to provide the following information:

1) Overall estimates of educational and occupational aspiration and expectations for the rural Native American youth population of New Mexico.

2) Overall estimates of deflection of goals for education and occupation.

3) Comparison of male and female on educational and occupational aspirations, expectations, and deflection.

4) Comparison of 10th and 12th grade students on educational and occupational aspirations, expectations, and deflection.

5) Determination as to the existence of interactions among grade level and sex on educational and occupational aspirations, expectations, and deflection.

## Procedures

### Sample

The sample for the larger study consisted of twelve rural high schools randomly chosen on a geographically stratified basis. Any school in the central third of New Mexico, located in a community of 2500 or less, was considered. The Native American sample was drawn from seven of these rural high schools. Four schools were purposively chosen from these schools under consideration with a majority Native American student population. Table 1 presents a list of the schools sampled containing Native American students and the number of students sampled from each school. The majority of the youth were Pueblos with 13 Navajos and six Apaches. The largest group (26) came from Jemez Pueblo. As shown in Table 1, 139 Native American students were selected for the sample, including 76 sophomores and 63 seniors.

Table 2 shows the number of respondents on each dependent measure question and Table 3 presents the percentage of students responding to each question.

Chi square analysis was used to determine whether significant differences existed between the number of respondents in the various groups. It was found that significantly more sophomore females failed to respond concerning occupational expectancy than did senior females (chi square = 6.064, $df = 1$, $p < .02$). No other group comparisons of respondents and non-respondents showed significant differences.

Chi square analysis was also used to determine if more students responded to the question concerning educational aspiration than to occupational aspiration, and to educational expectation than to occupational

expectation. In both cases, significantly more students responded to the educational question than to the occupational one ($p < .02$; $p < .01$).

Dependent Measures

The questionnaire provides fixed-choice stimulus questions to elicit responses which indicate educational and occupational aspirations and expectations. Aspirations have been defined as desires of the individual; expectations as the levels the respondent really expects to attain. When a difference exists, this is referred to as anticipatory goal deflection. These measurements are discussed in the following sections.

Educational aspirations and expectations. In regard to educational aspirations, the student was asked how much education he or she would desire if he were free to choose. In regard to educational expectations, the student was asked what he or she really expects to do about his education. The latter question assumes that the respondent will take into consideration his ability, financial condition, and social situation.

Question number 10: If you could have as much schooling as you desired, of which of the following would you do? (Circle one number):

1 Quit school right now.

2 Complete high school.

3 Complete a business, commercial, electronics, or some other technical program after finishing high school.

4 Graduate from a junior college (2 years).

5 Graduate from a college or university.

6 Complete additional studies after graduating from a college or university.

Question number 11: What do you really expect to do about your education? (Circle only one number):

Note: Responses for this question are exactly the same as for question number 10.

The responses are coded in accordance with the seven-level educational hierarchy. A zero was coded if a student did not respond to a question.

Occupational Aspirations and Expectations. Concerning occupational aspirations and expectations, the same concept was used as for educational aspirations and expectations. The stimulus questions were open-ended.

Question number 8: If you were completely free to choose any job, what would you desire most as a lifetime job? (In answering this question give an exact job. For example, do not say "work on the railroad" but tell us what railroad job you would like to have.) Write your answer in the box below:

ANSWER: [ ]

Question number 9: What kind of job do you really expect to have most of your life? (Write your answer in the box below. Please give an exact job.)

The answers to both questions were then coded according to an occupational level classification scale which was derived from the Duncan Scale to facilitate a uniform grouping of occupations listed by the respondents' inventories. The categories used were:

0 - No information

1 - High professional

2 - Low professional

3 - Glamor

4 - Managerial, official

5 - Clerical and sales

6 - Skilled worker

7 - Operative

8 - Laborer

9 - Housewife, other

Anticipatory Goal Deflection. Anticipatory goal deflection was determined by comparing the measures of aspiration and expectation. If this measure differs, deflection exists. There are two types of deflection: positive and negative. Negative deflection is judged to exist if the expectation level is lower than the aspiration level. Conversely, positive deflection is indicated when the expectation level is higher than the aspiration level.

Null Hypotheses

The information obtained from the sample was related to independent and dependent variables. Response groups were classified according to the following classification variables:

1. Grade level
   a. Sophomore
   b. Senior
2. Sex
   a. Male
   b. Female

Responses consist of measures on variables described as being dependent. They are listed as:

1. Educational aspiration level
2. Occupational aspiration level
3. Education expectation level
4. Occupational expectation level
5. Anticipatory goal deflection - education
6. Anticipatory goal deflection - occupation

Table 1

Sample of Native American Students in New Mexico Youth Study

| District<br>County | Sophomores | Seniors | Total |
|---|---|---|---|
| Bernalillo<br>Sandoval | 15 | 14 | 29 |
| Gadsden<br>Dona Ana | 1 | 0 | 1 |
| Jemez Springs<br>Sandoval | 32 | 17 | 49 |
| Laguna/Acoma<br>Valencia | 11 | 21 | 32 |
| Mountainair<br>Terrance | 0 | 1 | 1 |
| Magdalena<br>Socorro | 12 | 9 | 21 |
| Tularosa<br>Otero | 5 | 1 | 6 |
| Totals | 76 | 63 | 139 |

Table 2

Number of students responding to dependent measure questions

| | No. in Sample | Soph Males | Soph Females | Sr. Males | Sr. Females |
|---|---|---|---|---|---|
| Totals | 138* | 32 | 43 | 24 | 39 |
| Dependent Measure: | | | | | |
| Ed. Aspiration | 136 | 31 | 43 | 24 | 38 |
| Ed. Expectation | 137 | 32 | 43 | 24 | 38 |
| Ed. Deflection | 136 | 31 | 43 | 24 | 38 |
| Occup. Aspir. | 120 | 25 | 37 | 21 | 37 |
| Occup. Expect. | 109 | 25 | 30 | 18 | 36 |
| Occup. Deflection | 104 | 23 | 29 | 18 | 34 |

*Original sample was 139. One student failed to state whether he or she was male or female. The data for this student was not included in the analyses.

Table 3

Percentage of students responding to dependent measure questions

| | Percentage Responding | Soph Males | Soph Females | Sr. Males | Sr. Females |
|---|---|---|---|---|---|
| Dependent Measure: | | | | | |
| Ed. Aspiration | 98.6 | 96.9 | 100.0 | 100.0 | 97.4 |
| Ed. Expectation | 99.3 | 100.0 | 100.0 | 100.0 | 97.4 |
| Ed. Deflection | 98.6 | 96.9 | 100.0 | 100.0 | 97.4 |
| Occup. Aspiration | 87.0 | 78.1 | 86.0 | 87.5 | 94.9 |
| Occup. Expectation | 79.0 | 78.1 | 69.8 | 75.0 | 92.3 |
| Occup. Deflection | 75.4 | 71.9 | 67.4 | 75.0 | 87.2 |

Interest in the analysis centers on determining the significance of the differences among the various groups in relation to the dependent variables. Specifically, the following null hypotheses were tested:

$H_{o1}$: There are no significant differences between males and females on the 6 dependent variables.

$H_{o2}$: There are no significant differences between sophomores and seniors on the 6 dependent variables.

$H_{o3}$: There are no significant interactions between sex and grade level.

## Analysis of Data

### Educational Aspirations

Application of Bartlett's test indicated heterogeneity of variance for the educational aspiration data. Thus, a chi square analysis was used. Insufficient data in some cells prevented the data from being analyzed according to the six educational categories originally proposed by Edington (1975), and listed above (Siegel, 1956). Thus, the data was grouped into three categories: High (complete college or attend graduate school after college); Medium (complete business, commercial, electronics, technical program after high school or complete junior college); and Low (quit school or graduate from high school). This three-category classification follows that proposed by Edington (1975).

Table 4 presents a summary of the chi square analysis on the educational aspiration measure. As shown there, educational aspirations for females were significantly higher than for males (chi square=14.275, $df=2$, $p < .01$); aspirations for senior males were significantly higher than for sophomore males (chi square=11.614, $df=2$, $p < .01$); and aspirations for sophomore

females were significantly higher than for sophomore males (chi square= 19.380, df=2, $p < .01$).

Table 4

Educational Aspirations by School Classification and Sex

| Educational Level | Male[a] | | | | Female[a] | | | |
|---|---|---|---|---|---|---|---|---|
| | Soph[b,c] | | Sr.[b] | | Soph[c] | | Sr. | |
| | N | % | N | % | N | % | N | % |
| High | 4 | 12.500 | 10 | 41.667 | 24 | 55.814 | 21 | 53.846 |
| Medium | 9 | 28.125 | 9 | 37.500 | 13 | 30.233 | 9 | 23.077 |
| Low | 18 | 56.250 | 5 | 20.833 | 6 | 13.953 | 8 | 20.513 |
| No response[d] | 1 | 3.125 | 0 | 0.000 | 0 | 0.000 | 1 | 2.564 |
| Totals | 32 | 100.000 | 24 | 100.000 | 43 | 100.000 | 29 | 100.000 |

[a]Male vs. female: chi square = 14.275 df = 2 $p < .01$
[b]Male soph. vs. male seniors: chi square = 11.614 df = 2 $p < .01$
[c]Soph males vs. soph females: chi square = 19.380 df = 2 $p < .01$
[d]Not included in chi square tabulations

Educational Expectations

Due to lack of homogeneity of variance, a chi square analysis was used to analyze the educational expectation data. A three-category analysis (High, Medium, Low), similar to that used for educational aspirations, was utilized. Table 5 presents a summary of the analysis. This table shows that educational expectations for seniors were significantly higher than for sophomores (chi square = 6.09, df = 2, $p < .05$); that females' expectations were significantly higher than were males' (chi square = 10.00, df = 10.00, $p < .01$); and that the educational expectations of sophomore females were significantly higher than those of sophomore males (chi square = 10.85, df = 2, $p < .01$).

Table 5

Educational Expectations by School Classification and Sex

| Educational Level | Male[b] | | | | Female[b] | | | |
|---|---|---|---|---|---|---|---|---|
| | Soph[a,c] | | Sr.[a] | | Soph[a,c] | | Sr.[a] | |
| | N | % | N | % | N | % | N | % |
| High | 6 | 18.750 | 10 | 41.667 | 20 | 46.512 | 21 | 53.846 |
| Medium | 8 | 25.000 | 9 | 37.500 | 14 | 32.558 | 11 | 28.205 |
| Low | 18 | 56.250 | 5 | 20.833 | 9 | 20.930 | 6 | 15.385 |
| No response[d] | 0 | 0.000 | 0 | 0.000 | 0 | 0.000 | 1 | 2.564 |
| Totals | 32 | 100.000 | 24 | 100.000 | 43 | 100.000 | 39 | 100.000 |

[a]Soph vs. Seniors: chi square = 6.09, df = 2, $p < .05$

[b]Male vs. Females: chi square = 10.00, df = 2, $p < .01$

[c]Soph Males vs. Soph Females: chi square = 10.85, df = 2, $p < .01$

Educational Anticipatory Goal Deflection

No statistically significant differences were found for either the classification or the sex main effect or for the interaction effect. Table 6 summarizes the analysis. Sophomores showed a slight positive deflection while seniors deflected slightly on the negative side. Likewise, females showed a slight positive deflection while males showed a very slight negative deflection.

Table 6

Educational Anticipatory Goal Deflection
by School Classification and Sex

| Source of variance | SS | df | MS | F |
|---|---|---|---|---|
| Classification | 1.9352 | 1 | 1.9352 | 1.636 |
| Sex | .8252 | 1 | .8252 | .698 |
| Classification x Sex | .2427 | 1 | .2427 | .205 |
| Within-cell | 156.1386 | 132 | 1.1829 | |

Occupational Aspirations

A statistically significant difference was found between sophomores and seniors, with seniors having higher aspirations than sophomores. There was no significant difference between the occupation aspirations of males and females, and the classification by sex interaction was not significant. The results of this analysis are summarized in Table 7.

Table 7

Occupational Aspirations by School Classification and Sex

| Source of variance | SS | df | MS | F |
|---|---|---|---|---|
| Classification | 41.634 | 1 | 41.634 | 7.73* |
| Sex | 9.014 | 1 | 9.014 | 1.67 |
| Classification x Sex | .535 | 1 | .535 | .10 |
| Within-cell | 624.490 | 116 | 5.384 | |

* $p < .01$

In the Newman-Keuls analysis (Table 8), used to detect differences between means, a significant difference was found between sophomore and senior females (p just below .05), while the difference between sophomores and senior males barely missed significance at the .05 level.

Table 8

Newman-Keuls Analysis of Differences Between Means
Occupational Aspiration Measure

| Compare Means for: | Difference | ($\sigma_{\bar{x}}$ x q) | R | df |
|---|---|---|---|---|
| Soph and Sr. Males | 1.350 | 1.360 | 2 | 116 |
| Soph and Sr. Females | 1.081* | 1.070 | 2 | 116 |

*$p < .05$

Occupational Expectations

No statistically significant differences for main effects or the classification by sex interaction was found. Sophomore and senior male occupational aspirations remained at the same level while female seniors had somewhat lower aspirations than female sophomores, but not significantly so. Table 9 summarizes the results of the ANOVA analysis.

Table 9

Occupation Expectations by School Classification and Sex

| Source of variance | SS | df | MS | F |
|---|---|---|---|---|
| Classification | 5.885 | 1 | 5.885 | 1.04 |
| Sex | 8.255 | 1 | 8.255 | 1.46 |
| Classification x Sex | 8.280 | 1 | 8.280 | 1.46 |
| Within-cell | 595.328 | 105 | 5.670 | |

Occupational Anticipatory Goal Deflection

The ANOVA showed significant main effects for grade level ($p < .01$) and for sex ($p < .05$), with sophomore expectations exceeding aspirations and senior aspirations exceeding expectations, and male expectations exceeding aspirations and female aspirations exceeding expectations. The interaction between classification and sex was not significant. Table 10 summarizes the ANOVA analysis.

Table 10

Occupational Anticipatory Goal Deflection by School Classification and Sex

| Source of variance | SS | df | MS | F |
|---|---|---|---|---|
| Classification | 70.271 | 1 | 70.271 | 12.77** |
| Sex | 32.098 | 1 | 32.098 | 5.83* |
| Classification x Sex | 6.272 | 1 | 6.272 | 1.14 |
| Within-cell | 550.304 | 100 | 5.503 | |

** $p < .01$
* $p < .05$

The Newman-Keuls analysis (Table 11) shows a significant difference between sophomore and senior females, with senior female aspirations being higher than expectations, while sophomore females' expectations and aspirations are approximately the same. Male and female seniors also differed significantly on the goal deflection measure. While both groups showed aspirations exceeding expectations, female seniors showed a much larger deflection in this direction.

Table 11

Newman-Keuls Analysis of Differences Between Means
(Occupational Anticipatory Goal Deflection Measure)

| Compare Means for: | Difference | ($\sigma_{\bar{x}}$ x q) | R | df |
|---|---|---|---|---|
| Soph and Sr. Males | 1.183 | 1.460 | 2 | 100 |
| Soph and Sr. Females | 2.191** | 1.160 | 2 | 100 |
| Male and Female Sophs | .636 | 1.290 | 2 | 100 |
| Male and Female Srs. | 1.644* | 1.360 | 2 | 100 |

** $p < .01$
* $p < .05$

Within Group Deflection

Another question presented by the data concerned within group comparisons between aspirations and expectations on both the educational and occupational measures. t tests were performed on both educational and occupational goal deflection measures for the 4 groups. Of the 8 analyses, only the occupational goal deflection measure for female seniors showed a significant deflection, with goals being much higher than expectations ($t = 5.983$, $df = 33$, $p < .01$ (2-tailed)). A summary of comparisons for both educational and occupational aspirations and expectations, based upon median choices, is presented in Table 12.

Summary of Analyses

Educational measures. Female educational aspirations remained stable across sophomores and seniors while male aspirations at the sophomore level were significantly below female sophomores, and below senior males. Senior male aspirations were not significantly different from those of female seniors.

Table 12

Comparison of Educational and Occupational Aspirations and Expectations

| Group | Ed. Aspirations Median Description | Ed. Expectations Median Description | Occup. Aspirations Median Description | Occup. Expectations Median Description |
|---|---|---|---|---|
| Soph males | 2 complete H.S. | 2 complete H.S. | 6 skilled worker | 6 skilled worker |
| Soph females | 5 graduate college | 4 graduate junior college | 5 clerical, sales | 5 clerical, sales |
| Sr. males | 4 graduate junior college | 4 graduate junior college | 3 glamor | 4 management, official |
| Sr. females | 5 graduate college | 5 graduate college | 2 low professional | 5 clerical, sales |

The same trend was noted for the educational expectation measure, that is, sophomore males' expectations were significantly below those of sophomore females. However, on this measure, though male senior expectations rose above sophomore male expectations, they still remained significantly lower than for senior females.

On the educational deflection measure, no significant differences were detected between any of the groups, indicating that goals and expectations between groups were in line with one another.

Occupational measures. Both male and female senior occupational aspirations were significantly higher than the aspirations for their comparable sophomore groups. However, no significant differences appeared between groups on the occupational expectation measure.

For the occupational goal deflection measure, senior females showed high negative deflection (aspirations higher than expectations) and differed significantly from sophomore females (who showed slight positive deflection). Comparing senior males and females, both showed negative deflection with senior females showing significantly greater deflection.

Within Groups: Educational and Occupational Deflection. Educational and occupational aspirations and expectations within each group did not deflect significantly except for female seniors. This group showed significantly higher occupation aspirations than expectations.

## Discussion and Implications

One other study using the same instrument was conducted by Stout (1974) with Navajo youth. The major difference was that the Navajo study obtained information from only sophomores. The following sex comparisons can be made between the two.

| | Predominately Pueblo | Navajo |
|---|---|---|
| Occupational aspirations | same | female higher |
| Occupational expectations | same | female higher |
| Educational aspirations | female high | same |
| Educational expectations | female high | same |
| Occupational goal deflections | female high | same |
| Educational goal deflections | same | same |

There were several findings with the Navajo females having higher occupational aspirations than Navajo males with the predominately Pueblo females having higher educational aspirations than the predominately Pueblo males. In each case, however, it was the female with the higher aspirations or expectations than the male.

When the American Indian youth were compared with Anglo and Mexican American youth, Edington (1975) found they had lower educational aspirations than did rural Anglo youth and were similar to those of the Mexican American youth. He found the educational expectations to be lower than the Anglos, but slightly higher than Mexican Americans. He found that in occupational aspirations the American Indian were less professional than the Anglo American and with no significant difference in expectations. The same study found much lower goal deflections for both education and occupations among American Indian youth than either the Anglos and Mexican Americans. This may indicate a more realistic aspiration among Indian youth than the two other ethnic groups.

Generally it can be concluded that American Indian youth aspire to both higher levels of education and occupations than are generally found among their parents and they look upon both as a means of upward mobility.

Bibliography

Edington, E., Pettibone, T., and Heldt, J. Educational, Occupational, and Residence Aspirations and Expectations for Rural and Minority Youth in New Mexico. Final Report, USOE, December 1975.

Siegel, S. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, 1956.

Stout, L. A. and Edington, E. D. Navajo Adolescents' Projections for Status Attainment, Occupation, Education, and Size of Income. Paper presented at Southwestern Sociological Association, Dallas, Texas, March 1974.